

Environmental
Restoration
Contractor

ERC Team

Interoffice Memorandum

Job No. 22192

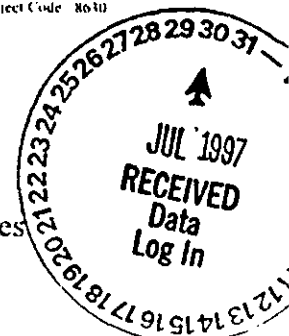
Written Response Required? NO
Closes CCN N/A
OU 200-UP-1
TSD N/A
FRA N/A
Subject Code 8630

TO: M. A. Buckmaster, H0-19
M. J. Galgoul, H9-03

DATE: July 15, 1997

COPIES: See Below

FROM: R. T. Coffman
Sampling & Analytical Services
X7-02/531-0661



0661SUBJECT:

200-UP-1 IRM IMPLEMENTATION SAMPLING, MONTHLY GROUNDWATER RESULTS, MAY 1997, REV 0

REFERENCES:

1. BHI, 1996, *On-Site Measurements Quality Assurance Plan*, BHI-QA-03, Plan 5.2, REV. 1, Bechtel Hanford, Inc., Richland, Washington.
2. BHI, 1995, *Field Screening Procedures*, BHI-EE-05, Bechtel Hanford, Inc., Richland, Washington.
3. BHI, 1996, *200-UP-1 Field Screening Support Logbook*, EL-1334, Bechtel Hanford, Inc., Richland, Washington.

This data package contains field screening results for groundwater samples analyzed to support the 200-UP-1 IRM Implementation Sampling program. The Quality Assurance level for this work corresponds to QC-1 as specified in the reference 1 (BHI 1997). Samples collected and analyzed during May 1997 were managed under SAF C97-013 and C97-015.

Attachment 1 contains Volatile Organic Compound (VOC), total uranium, and technetium-99 results for groundwater samples collected to support the referenced project. The VOC results were generated using a Hewlett Packard 5890 gas chromatograph with a headspace autosampler operated in accordance with Field Screening Procedure (FSP) 1.29, *Aqueous Headspace Analysis of Volatile Organic Compounds in Water Using Hewlett Packard 5890 Gas Chromatograph* (BHI 1997). Information concerning operation and calibration of the gas chromatograph is contained in the instrument logbook EL-1329.

The total uranium results were generated using a ChemChek KPA-11a Kinetic Phosphorescence Analyzer operated in accordance with FSP 1.22, *Kinetic Phosphorescence Analysis of Total Uranium in Water* (BHI 1996). Information concerning operation and calibration of the ChemChek KPA-11a is contained in the instrument logbook EL-1335.

M. A. Buckmaster, H0-19
Page 2

The technetium-99 analyses were conducted at the off-site laboratory of Quanterra Environmental Services Richland Laboratory (QTESRL). The results are included in this data package for information only. Questions concerning the analyses and results should be directed to the laboratory.

Please contact me if you have any questions on this information.



R. T. Coffman, Analyst

RTC:rtc

Attachments:

- Attachment 1. 200-UP-1 IRM Implementation Sampling, Monthly Groundwater Results.
May 1997
- Attachment 2. Sample Chain of Custody Sheets

Copies:

- D. E. Ayres, B1-35, w/attachment 1 and 2**
- J. V. Borghese, H9-03, w/attachment 1 only
- R. T. Coffman, X7-02, w/attachment 1 and 2**
- C. W. Denslow, H9-03, w/attachment 1 only
- B. H. Ford, H0-02, w/attachment 1 only
- I. D. Jacques, L6-06, w/attachment 1 only
- R. B. Kerkow, X7-02, w/attachment 1 only
- S. A. Strobe, T7-12, w/attachment 1 only
- D. A. St John, N1-28, w/attachment 1 only
- L. C. Swanson, H9-02, w/attachment 1 only
- BHI Document Control, H4-79, w/original attachments

200-UP-1 IRM Implementation Sampling
Monthly Groundwater Results, May 1997
SAF C97-013 and C97-015

Sample Location	HEIS Number	Sample Date	Analysis Date (VOA)	Chloroform (µg/L)	Carbon Tetrachloride (µg/L)	TCE (µg/L)	Uranium (µg/L)	Technetium-99 (pCi/L)
299-W19-20	BOK596	5/21/97	NA	NA	NA	NA	NA	7310
299-W19-20	BOK595	5/21/97	5/27/97	4.5	200	5.9	1730	NA
299-W19-24	BOK599	5/19/97	NA	NA	NA	NA	NA	6430
299-W19-24	BOK598	5/19/97	5/27/97	2.1	75	< 2.0	2860	NA
299-W19-26	BOK581	5/20/97	NA	NA	NA	NA	NA	15200
299-W19-26	BOK580	5/20/97	5/27/97	4.9	190	< 2.0	630	NA
299-W19-28	BOK583	5/19/97	NA	NA	NA	NA	NA	14900
299-W19-28	BOK582	5/19/97	5/27/97	2.0	12	< 2.0	345	NA
299-W19-29	BOK585	5/19/97	NA	NA	NA	NA	NA	156
299-W19-29	BOK584	5/19/97	5/27/97	2.9	27	< 2.0	54	NA
299-W19-30	BOK587	5/19/97	NA	NA	NA	NA	NA	6880
299-W19-30	BOK586	5/19/97	5/27/97	< 2.0	14	< 2.0	550	NA
299-W19-34A	BOK589	5/19/97	NA	NA	NA	NA	NA	242
299-W19-34A	BOK588	5/19/97	5/27/97	7.6	81	3.6	1.7	NA
299-W19-35	BOK5C1	5/19/97	NA	NA	NA	NA	NA	594
299-W19-35	BOK5C0	5/19/97	5/27/97	< 2.0	165	14	45	NA
299-W19-37	BOKBR3	5/20/97	NA	NA	NA	NA	NA	1760
299-W19-37	BOK5C2	5/20/97	5/27/97	< 2.0	16	< 2.0	835	NA
299-W19-38	BOKBR5	5/20/97	NA	NA	NA	NA	NA	2600
299-W19-38	BOKBR4	5/20/97	5/27/97	4.1	130	< 2.0	200	NA
299-W19-40	BOKBR7	5/20/97	NA	NA	NA	NA	NA	401
Duplicate @ 299-W19-40	BOKBR9	5/20/97	NA	NA	NA	NA	NA	401
299-W19-40	BOKBR6	5/20/97	5/27/97	4.4	51	< 2.0	140	NA
Duplicate @ 299-W19-40	BOJBR8	5/20/97	5/27/97	4.4	50	< 2.0	140	NA
Trip Blank	BOJYN1	5/19/97	5/27/97	< 2.0	< 2.0	< 2.0	NA	NA
Trip Blank	BOKBT0	5/21/97	5/27/97	< 2.0	< 2.0	< 2.0	NA	NA

NA - Not Analyzed

J - Value less than practical quantitation limit

Analyst:

R.T. Coffman 7-15-97
 R.T. Coffman

VOA Instrument: Hewlett Packard 5890 GC, Serial # 3235A47685

Method: Dual DB-VRX columns, ECD/FID, 1mL headspace injection

Logbook: 200-UP-1 Field Logbook, EL 1334.

Uranium Instrument: ChemChek KPA-11a, Serial # 9445050065

Method: Kinetic Phosphorescence

Logbook: 200-UP-1 Field Logbook, EL 1334.

Pacific Northwest National Laboratory		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						C97-013-90		Page 1 of 1					
Collector RZ STEFFLER (RFS)				Company Contact JH KESSNER		Telephone No. (509)372-9538		Project Coordinator Stewart, DL		Data Turnaround Field					
Project Designation 200-UP-1 IRM Groundwater Sampling FY1997				Sampling Location 200-W		SAF No. C97-013									
Ice Chest No. SML-561				Field Logbook No. WAC-N-205 #64		Method of Shipment Govt. Vehicle									
Shipped To Mobile Laboratory				Offsite Property No. NA		Bill of Lading/Air Bill No. NA									
POSSIBLE SAMPLE HAZARDS/REMARKS				Preservation		HN03 to pH <2	HCl to pH <2 Cooled to 4C								
				Type of Container		GP	Gs*								
				No. of Container(s)		1	1								
Special Handling and/or Storage				Volume		20ml	40ml								
SAMPLE ANALYSIS						URANIUM TOTAL	VOA BY FIELD GC -- Chlorinated Hydrocarbon								
Sample No	Matrix *	Sample Date	Sample Time												
B0K595	Water	MAY 21 1997	1107	X	X										
CHAIN OF POSSESSION		Sign/Print Names				SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPT						Matrix * S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation N = Other			
Relinquished By: RZ STEFFLER (RFS)		Date Time: 5-22-97		Received By: RT COFFMAN / RT Coffman										Date Time: 5/22/97	
Relinquished By:		Date Time:		Received By:										Date Time:	
Relinquished By:		Date Time:		Received By:										Date Time:	
Relinquished By:		Date Time:		Received By:										Date Time:	
LABORATORY SECTION		Received By:				Title:						Date Time:			
FINAL SAMPLE DISPOSITION		Disposal Method:				Disposed By:						Date Time:			

Pacific Northwest National Laboratory		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						C97-013-93		Page 1 of 1			
Collector AG RIZZO (RFS)				Company Contact J H KESSNER		Telephone No. (509)372-9538		Project Coordinator Stewart, DL		Data Turnaround Field			
Project Designation 200-UP-1 IRM Groundwater Sampling FY 1997				Sampling Location 200-W		SAF No. C97-013							
Ice Chest No. SINK 497				Field Logbook No. CUMC-N-205 64 PAGE 51		Method of Shipment Govt. Vehicle							
Shipped To Mobile Laboratory				Offsite Property No. N/A		Bill of Lading/Air Bill No. N/A							
POSSIBLE SAMPLE HAZARDS REMARKS N/A				Preservation		INNOV pH 12	REL. TO pH 12						
				Type of Container		GP	15*						
				No. of Container(s)		1	1						
Special Handling and/or Storage Cool 4°C				Volume		20ml	30ml						
SAMPLE ANALYSIS						URANIUM TOTAL	ACT. BY FIELD - - - Chlorinated Hydrocarbons						
Sample No	Matrix *	Sample Date	Sample Time										
BOK598	Water	MAY 19 1997	1023	✓	✓								
CHAIN OF POSSESSION		Sign/Print Names				SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPT <div style="text-align: right;">Matrix *</div> <div style="font-size: small;"> S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other </div>							
Relinquished By AG RIZZO (RFS)		Date Time 5-19-97	Received By RT Coffman / RT Coffman		Date Time 5-19-97								
Relinquished By		Date Time	Received By		Date Time								
Relinquished By		Date Time	Received By		Date Time								
Relinquished By		Date Time	Received By		Date Time								
LABORATORY SECTION	Received By		Title				Date Time						
FINAL SAMPLE DISPOSITION	Disposal Method		Disposed By				Date Time						

Pacific Northwest National Laboratory		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						C97-013-95		Page 1 of 1						
Collector AG RIZZO (RFS)				Company Contact JH KESSNER		Telephone No. (509)372-9538		Project Coordinator Stewart, DL		Data Turnaround Field						
Project Designation 200-UP-1 IRM Groundwater Sampling FY 1997				Sampling Location 200-W		SAF No. C97-013										
Ice Chest No. <i>SMIL 493</i>				Field Logbook No. <i>LOHL - N - 205 GY PAGE 53</i>		Method of Shipment Govt. Vehicle										
Shipped To Mobile Laboratory				Offsite Property No. <i>N/A</i>		Bill of Lading/Air Bill No. <i>N/A</i>										
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>				Preservation		HN03 to pH -2	HCl to pH +2 Cooled to 4C									
				Type of Container		GP	Gs*									
				No. of Container(s)		1	1									
Special Handling and/or Storage <i>203/400</i>				Volume		20ml	40ml									
SAMPLE ANALYSIS						URANIUM TOTAL	VOA BY FIELD GC - Chlorinated Hydrocarbon									
Sample No		Matrix *		Sample Date		Sample Time										
80K5B0		Water		<i>MAY 20 1997</i>		<i>1042</i>		<i>✓</i>	<i>✓</i>							
CHAIN OF POSSESSION		Sign/Print Names				SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPT <i>236</i>							Matrix * S - Sed SE - Sediment SO - Solid SL - Sludge W - Water O - Oil A - Air DS - Drum Solids DL - Drum Liquids T - Tissue WI - Wipe L - Liquid V - Vegetation X - Other			
															Relinquished By	
															Relinquished By	
															Relinquished By	
															Relinquished By	
		Date Time		Received By		Date Time										
LABORATORY SECTION		Received By				Title				Date Time						
FINAL SAMPLE DISPOSITION		Disposal Method				Disposed By				Date Time						

Pacific Northwest National Laboratory		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						C97-013-97		Page 1 of 1			
Collector AG RIZZO (RFS)				Company Contact JH KESSNER		Telephone No. (509)372-9538		Project Coordinator Stewart, DL		Data Turnaround Field			
Project Designation 200-UP-1 IRM Groundwater Sampling FY1997				Sampling Location 200-W		SAF No. C97-013							
Ice Chest No. <i>SMC 443</i>				Field Logbook No. <i>LHC-N-205 G4 PAGE 51</i>		Method of Shipment Govt. Vehicle							
Shipped To Mobile Laboratory				Offsite Property No. <i>N/A</i>		Bill of Lading/Air Bill No. <i>N/A</i>							
POSSIBLE SAMPLE HAZARDS/REMARKS <i>N/A</i>				Preservation	H ₂ O3 to pH 2	HCl to pH <2 Cooled to 4C							
				Type of Container	GP	Gs*							
				No. of Container(s)	1	1							
Special Handling and/or Storage <i>Cool/4°C</i>				Volume	20ml	40ml							
SAMPLE ANALYSIS				URANIUM TOTAL	VOA BY FIELD GC -- Chlorinated Hydrocarbon								
Sample No	Matrix *	Sample Date	Sample Time										
BOK5B2	Water	MAY 19 1997	<i>1119</i>	<i>L</i>	<i>L</i>								
CHAIN OF POSSESSION		Sign/Print Names				SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPT <i>2.9</i>					Matrix * S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Au DS = Drum Solids DL = Drum Liquids T = Tissue W1 = Wipe L = Liquid V = Vegetation X = Other		
Relinquished By: <i>AG RIZZO</i>		Date Time: <i>1413</i>	Received By: <i>RT COFFMAN/RT C/fur</i>		Date Time: <i>1413</i>								
AG RIZZO (RFS)		<i>5-19-97</i>			<i>5-19-97</i>								
Relinquished By:		Date Time:	Received By:		Date Time:								
Relinquished By:		Date Time:	Received By:		Date Time:								
Relinquished By:		Date Time:	Received By:		Date Time:								
LABORATORY SECTION		Received By				Title				Date/Time			
FINAL SAMPLE DISPOSITION		Disposal Method				Disposed By				Date Time			

Pacific Northwest National Laboratory		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						C97-013-99		Page 1 of 1			
Collector D.R. BREWINGTON (RFS)				Company Contact J.H. KESSNER		Telephone No. (509)372-9538		Project Coordinator Stewart, DL		Data Turnaround Field			
Project Designation 200-UP-1 IRM Groundwater Sampling FY1997				Sampling Location 200-W		SAF No. C97-013							
Ice Chest No. 7011A 268				Field Logbook No. WHL 0-205 #63		Method of Shipment Govt. Vehicle							
Shipped To Mobile Laboratory				Offsite Property No. 1A		Bill of Lading/Air Bill No. 6A							
POSSIBLE SAMPLE HAZARDS/REMARKS				Preservation		HN03 to pH +2	HCl to pH +2 Cooled to 4C						
				Type of Container		GP	Gs*						
				No. of Container(s)		1	1						
Special Handling and/or Storage				Volume		20ml	40ml						
SAMPLE ANALYSIS						URANIUM TOTAL	VOA BY FIELD GC -- Chlorinated Hydrocarbon						
Sample No.	Matrix *	Sample Date	Sample Time										
B0K5B4	Water	5/19/97	1117	✓	✓								
CHAIN OF POSSESSION		Sign/Print Names				SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPT <div style="text-align: center; font-size: 2em;">4</div>						Matrix * S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other	
Relinquished By D.R. BREWINGTON (RFS)	Date Time 5/19/97 1310	Received By RT COFFMAN / RT Coffman	Date Time 5/19/97 1310										
Relinquished By	Date Time	Received By	Date Time										
Relinquished By	Date Time	Received By	Date Time										
Relinquished By	Date Time	Received By	Date Time										
LABORATORY SECTION		Received By				Date Time							
FINAL SAMPLE DISPOSITION		Disposal Method				Disposed By						Date Time	

Pacific Northwest National Laboratory		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						C97-013-101		Page 1 of 1			
Collector D.R. BREWINGTON (HFS) (S-H) NO SIGNATURE				Company Contact J.H. KESSNER		Telephone No. (509)372-9538		Project Coordinator Stewart, DI		Data Turnaround Field			
Project Designation 200-UP-1 IRM Groundwater Sampling FY1997				Sampling Location 200-W		SAF No. C97-013							
Ice Chest No. 5111 L #2681				Field Logbook No. WPC-11-205 #63		Method of Shipment Govt Vehicle							
Shipped To Mobile Laboratory				Offsite Property No. N/A		Bill of Lading/Air Bill No. N/A							
POSSIBLE SAMPLE HAZARDS/REMARKS				Preservation	HNO3 to pH <2	HCl to pH <2 Cooked to 4C							
				Type of Container	GP	Gs*							
				No. of Container(s)	1	1							
Special Handling and/or Storage				Volume	20ml	40ml							
SAMPLE ANALYSIS					URANIUM TOTAL	VOA BY FIELD GC -- Chlorinated Hydrocarbon							
Sample No.	Matrix *	Sample Date	Sample Time										
B0K5B6	Water	5/19/97	0918	✓	✓								
CHAIN OF POSSESSION		Sign/Print Names				SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPT <div style="text-align: center; font-size: 2em;">12</div>						Matrix * S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other	
		Relinquished By D.R. BREWINGTON (HFS)	Date/Time 5/19/97 1310	Received By RT COFFMAN/RT Coffman	Date/Time 5/19/97								
		Relinquished By	Date/Time	Received By	Date/Time								
		Relinquished By	Date/Time	Received By	Date/Time								
		Relinquished By	Date/Time	Received By	Date/Time								
LABORATORY SECTION		Received By				Title						Date/Time	
FINAL SAMPLE DISPOSITION		Disposal Method				Disposed By						Date/Time	

Pacific Northwest National Laboratory		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						C97-013-103		Page 1 of 1	
Collector D.R. BREWINGTON				Company Contact J.H. KESSNER		Telephone No. (509)372-9538		Project Coordinator Stewart, DL		Data Turnaround Field	
Project Designation 200-UP-1 IRM Groundwater Sampling FY1997				Sampling Location 200-W		SAF No. C97-013					
Ice Chest No. SAIL #268				Field Logbook No. 10 HC - 4-205 #63		Method of Shipment Govt. Vehicle					
Shipped To Mobile Laboratory				Offsite Property No. 618		Bill of Lading/Air Bill No. NH					
POSSIBLE SAMPLE HAZARDS-REMARKS				Preservation		HNO ₃ to pH <2	H ₂ O to pH <2 soaked to 4C				
				Type of Container		GP	GS*				
				No. of Container(s)		1	1				
Special Handling and/or Storage				Volume		20ml	40ml				
SAMPLE ANALYSIS						URANIUM TOTAL	VOA BY FIELD GC - Chlorinated H ₂ O de-carbon				
Sample No.		Matrix *	Sample Date	Sample Time							
BOK588		Water	5/19/97	1045	V	V					
CHAIN OF POSSESSION		Sign/Print Names				SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPT 61					
Relinquished By D.R. BREWINGTON (RFS: 5/19/97 1310) D.R. Brewington		Date/Time 5/19/97 1310		Received By ETCOFFMAN/RT Coffman		Date/Time 5/19/97		Matrix * S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other			
Relinquished By		Date/Time		Received By		Date/Time					
Relinquished By		Date/Time		Received By		Date/Time					
Relinquished By		Date/Time		Received By		Date/Time					
Relinquished By		Date/Time		Received By		Date/Time					
LABORATORY SECTION		Received By				Title				Date/Time	
FINAL SAMPLE DISPOSITION		Disposal Method				Disposed By				Date/Time	

Pacific Northwest National Laboratory		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						C97-013-105		Page 1 of 1	
Collector AG RIZZO (RFS)				Company Contact JH KESSNER		Telephone No. (509)372-9538		Project Coordinator Stewart, DI.		Data Turnaround Field	
Project Designation 200-UP-1 IRM Groundwater Sampling FY1997				Sampling Location 200.W		SAF No. C97-013					
Ice Chest No. Sunk 493				Field Logbook No. WHC-N-205 64 PAGE 51		Method of Shipment Govt Vehicle					
Shipped To Mobile Laboratory				Offsite Property No. N/A		Bill of Lading/Air Bill No. N/A					
POSSIBLE SAMPLE HAZARDS/REMARKS N/A				Preservation	HNO3 to pH <2	HCl to pH <2 Cooled to 4C					
				Type of Container	GP	Gs*					
				No. of Container(s)	1	1					
Special Handling and/or Storage Cool 4°C				Volume	20ml	40ml					
SAMPLE ANALYSIS				URANIUM TOTAL	VOA BY FIELD GC -- Chlorinated Hydrocarbon						
Sample No.	Matrix *	Sample Date	Sample Time								
BOK5C0	Water	MAY 19 1997	1218	✓	✓						
B03YN1	W	5-19-97	0800		✓						
CHAIN OF POSSESSION		Sign/Print Names				SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPT					Matrix *
Relinquished By AG RIZZO (RFS)		Date Time 1413 5-19-97	Received By RT COFFMAN / RT Coffman		Date Time 1413 5-19-97	112					S = Soil
Relinquished By		Date Time	Received By		Date Time						SE = Sediment
Relinquished By		Date Time	Received By		Date Time						SO = Solid
Relinquished By		Date Time	Received By		Date Time						SL = Sludge
Relinquished By		Date Time	Received By		Date Time						W = Water
Relinquished By		Date Time	Received By		Date Time						O = Oil
Relinquished By		Date Time	Received By		Date Time						A = Au
Relinquished By		Date Time	Received By		Date Time						DS = Drum Solids
Relinquished By		Date Time	Received By		Date Time						DL = Drum Liquids
Relinquished By		Date Time	Received By		Date Time						T = Tissue
Relinquished By		Date Time	Received By		Date Time						WI = Wipe
Relinquished By		Date Time	Received By		Date Time						L = Liquid
Relinquished By		Date Time	Received By		Date Time						V = Vegetation
Relinquished By		Date Time	Received By		Date Time						X = Other
LABORATORY SECTION	Received By		Title			Date/Time					
FINAL SAMPLE DISPOSITION	Disposal Method		Disposed By			Date/Time					

Pacific Northwest National Laboratory		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						C97-013-107		Page 1 of 1		
Collector AG RIZZO (RFS)			Company Contact J.H. KESSNER		Telephone No. (509)372-9538		Project Coordinator Stewart, DL		Data Turnaround Field			
Project Designation 200-UP-1 IRM Groundwater Sampling FY1997			Sampling Location 200-W			SAF No. C97-013						
Ice Chest No. 5012 493			Field Logbook No. LOG - N-205 64 PAGE 53			Method of Shipment Govt. Vehicle						
Shipped To Mobile Laboratory			Offsite Property No. N/A			Bill of Lading/Air Bill No. N/A						
POSSIBLE SAMPLE HAZARDS/REMARKS N/A			Preservation	HNO ₃ to pH <2	HCl to pH <2 Cooled to 4C							
			Type of Container	GP	GS*							
			No. of Container(s)	1	1							
Special Handling and/or Storage COOL 40C			Volume	20ml	40ml							
SAMPLE ANALYSIS				URANIUM TOTAL	VOA BY FIELD GC - Chlorinated Hydrocarbon							
Sample No.	Matrix *	Sample Date	Sample Time									
BOK5C2	Water	MAY 20 1997	0838	✓	✓							
CHAIN OF POSSESSION		Sign/Print Names			SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPT						Matrix *	
Relinquished By AG RIZZO (RFS)	Date Time 5-20-97	Received By RT COFFMAN / RT Coffman	Date Time 5/20/97	15.						S - Soil		
Relinquished By	Date Time	Received By	Date Time							SE - Sediment		
Relinquished By	Date Time	Received By	Date Time							SO - Solid		
Relinquished By	Date Time	Received By	Date Time							SL - Sludge		
Relinquished By	Date Time	Received By	Date Time							W - Water		
Relinquished By	Date Time	Received By	Date Time							O - Oil		
Relinquished By	Date Time	Received By	Date Time							A - Air		
Relinquished By	Date Time	Received By	Date Time							DS - Drum Solids		
Relinquished By	Date Time	Received By	Date Time							DL - Drum Liquids		
Relinquished By	Date Time	Received By	Date Time							T - Tissue		
Relinquished By	Date Time	Received By	Date Time							WI - Wipe		
Relinquished By	Date Time	Received By	Date Time							L - Liquid		
Relinquished By	Date Time	Received By	Date Time							V - Vegetation		
Relinquished By	Date Time	Received By	Date Time							X - Other		
LABORATORY SECTION	Received By			Title			Date/Time					
FINAL SAMPLE DISPOSITION	Disposal Method			Disposed By			Date/Time					

Pacific Northwest National Laboratory		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						C97-013-109		Page 1 of 1		
Collector AG RIZZO (RFS)				Company Contact J.H. KESSNER		Telephone No. (509) 372-9538		Project Coordinator Stewart, DL		Data Turnaround Field		
Project Designation 200-UP-I IRM Groundwater Sampling FY 1997				Sampling Location 200-W		SAF No. C97-013						
Ice Chest No. 5111L 493				Field Logbook No. LOG - N - 205 64 PAGE 53		Method of Shipment Govt Vehicle						
Shipped To Mobile Laboratory				Offsite Property No. N/A		Bill of Lading/Air Bill No. N/A						
POSSIBLE SAMPLE HAZARDS/REMARKS N/A				Preservation	HNO ₃ to pH <2	HE to pH <2 (cooled to 4°C)						
				Type of Container	GP	GS*						
				No. of Container(s)	1	1						
Special Handling and/or Storage 0001 40C				Volume	20ml	40ml						
SAMPLE ANALYSIS					URANIUM TOTAL	VOABY FIELD GC -- Chlorinated Hydrocarbon						
Sample No.	Matrix *	Sample Date	Sample Time									
BOKBR4	Water	MAY 20 1997	0920	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>							
CHAIN OF POSSESSION		Sign/Print Names				SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPT 153.					Matrix * S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other	
Relinquished By AG RIZZO (RFS)	Date Time 5/20/97	Received By RT Coffman	Date Time 5/20/97									
Relinquished By	Date Time	Received By	Date Time									
Relinquished By	Date Time	Received By	Date Time									
Relinquished By	Date Time	Received By	Date Time									
LABORATORY SECTION	Received By				Title				Date/Time			
FINAL SAMPLE DISPOSITION	Disposal Method				Disposed By				Date/Time			

Pacific Northwest National Laboratory		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST										C97-013-111		Page 1 of 1			
Collector AG RIZZO (RFS)				Company Contact JH KESSNER				Telephone No. (509) 372-9538				Project Coordinator Stewart, DI.				Data Turnaround Field	
Project Designation 200-CP-1 IRM Groundwater Sampling 1/1997				Sampling Location 200-W				SAF No. C97-013									
Ice Chest No. S-11 493				Field Logbook No. EWAC-N-205 64 PAGE 53				Method of Shipment Govt. Vehicle									
Shipped To Mobile Laboratory				Offsite Property No. N/A				Bill of Lading/Air Bill No. N/A									
POSSIBLE SAMPLE HAZARDS REMARKS N/A				Preservation		HNO ₃ to pH 2		HCl to pH 2 Cooled to 8									
				Type of Container		GP		Gs*									
				No. of Container(s)		1		1									
Special Handling and/or Storage 020/40C				Volume		20ml		40ml									
SAMPLE ANALYSIS				URANIUM TOTAL		VOA BY FIELD GC - Chlorinated Hydrocarbon											
Sample No.		Matrix *		Sample Date		Sample Time											
BOKBR6		Water		MAY 20 1997		1117											
CHAIN OF POSSESSION		Sign/Print Names						SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPT									
Relinquished By AG RIZZO (RFS)		Date Time 5-20-97		Received By RT Coffman/RT Coffman		Date Time 5/20/97											
Relinquished By		Date Time		Received By		Date Time											
Relinquished By		Date Time		Received By		Date Time											
Relinquished By		Date Time		Received By		Date Time											
LABORATORY SECTION		Received By						Title						Date/Time			
FINAL SAMPLE DISPOSITION		Disposal Method						Disposed By						Date/Time			

Pacific Northwest National Laboratory		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						C97-013-113		Page 1 of 1	
Collector AG RIZZO (RFS)			Company Contact JH KESSNER		Telephone No. (509)372-9538		Project Coordinator Stewart, DL		Data Turnaround Field		
Project Designation 200-UP-1 IIRM Groundwater Sampling FY1997			Sampling Location 200-W				SAF No. C97-013				
Ice Chest No. SINK 493			Field Logbook No. 200-W-205 64 PAGE 33				Method of Shipment Govt Vehicle				
Shipped To Mobile Laboratory			Offsite Property No. N/A				Bill of Lading/Air Bill No. N/A				
POSSIBLE SAMPLE HAZARDS/REMARKS N/A			Preservation		HNO ₃ to pH <2	HCl to pH <2 Cooled to 4C					
			Type of Container		GP	Gs*					
			No. of Container(s)		1	1					
Special Handling and/or Storage 0001 4°C			Volume		20ml	40ml					
SAMPLE ANALYSIS					URANIUM TOTAL	VOA BY FIELD GC -- Chlorinated Hydrocarbon					
Sample No.		Matrix *	Sample Date	Sample Time							
BOKBR8		Water	MAY 20 1997	1113	C	C					
CHAIN OF POSSESSION		Sign/Print Names				SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPT <div style="float: right;"> Matrix * S = Soil SE = Sediment SO = Solid SL = Sludge W = Water O = Oil A = Air DS = Drum Solids DL = Drum Liquids T = Tissue WI = Wipe L = Liquid V = Vegetation X = Other </div>					
Relinquished By: AG RIZZO (RFS)		Date Time: 1408 5-20-97	Received By: RT Coffman / RT Coffman		Date Time: 1408 5/20/97						
Relinquished By:		Date Time:	Received By:		Date Time:						
Relinquished By:		Date Time:	Received By:		Date Time:						
Relinquished By:		Date Time:	Received By:		Date Time:						
LABORATORY SECTION		Received By				Title					
FINAL SAMPLE DISPOSITION		Disposal Method				Disposed By					
						Date Time					
						Date Time					

Pacific Northwest National Laboratory		CHAIN OF CUSTODY/SAMPLE ANALYSIS REQUEST						C97-013-115		Page 1 of 1			
Collector RZ STEFFLER (RFS)				Company Contact J.H. KESSNER		Telephone No. (509)372-9538		Project Coordinator Stewart, DL		Data Turnaround Field			
Project Designation 200-UP-1 IRM Groundwater Sampling FY1997				Sampling Location 200-W		SAF No. C97-013							
Ice Chest No.				Field Logbook No. WHC-N-205 #65		Method of Shipment Gov. Vehicle							
Shipped To Mobile Laboratory				Offsite Property No. N/A		Bill of Lading/Air Bill No. N/A							
POSSIBLE SAMPLE HAZARDS/REMARKS				Preservation		HCl to pH <2 Cooled to 4C							
				Type of Container		Gs*							
				No. of Container(s)		1							
Special Handling and/or Storage				Volume		40ml							
SAMPLE ANALYSIS						VOA BY FIELD GC - Chlorinated Hydrocarbon							
Sample No.		Matrix *		Sample Date		Sample Time							
BOKBT0		Water		MAY 21 1997		0750		X					
CHAIN OF POSSESSION		Sign/Print Names				SPECIAL INSTRUCTIONS TOTAL ACTIVITY EXEMPT FAX copies of log-in to DL Stewart (372-1704) & JM Durcan (372-9052)						Matrix * S - Soil SE - Sediment SO - Solid SL - Sludge W - Water O - Oil A - Air DS - Drum Solids DL - Drum Liquids T - Tissue WI - Wipe L - Liquid V - Vegetation X - Other	
Relinquished By RZ Steffler		Date Time 5-22-97		Received By RT Coffman/RT Coffman		Date Time 5/22/97							
Relinquished By		Date Time		Received By		Date Time							
Relinquished By		Date Time		Received By		Date Time							
Relinquished By		Date Time		Received By		Date Time							
LABORATORY SECTION		Received By				Title				Date Time			
FINAL SAMPLE DISPOSITION		Disposal Method				Disposed By				Date/Time			